

To prepare the composite material, the said composition is then poured to form a film and the solvent is slowly evaporated.

Evaporation may be conducted at room temperature
5 or at a higher temperature, for example from 25 to 40°C in a nitrogen atmosphere.

Generally, the quantities of mixed solutions are such that after evaporation of the solvent a composite material is obtained containing:

- 10 a) 0.06 to 10 % by weight polyaniline and dopant,
- b) 55 to 99.9 % by weight of insulating polymer, and
- c) up to 44.94 % by weight of plasticizer for the insulating polymer.

15 Other characteristics and advantages of the invention will become better apparent on reading the following examples, evidently given for illustration purposes and therefore non-limitative, with reference to the appended drawings.

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Brief description of the drawings

Figure 1 illustrates the variations in reduced conductivity of a polyaniline film of the invention PANI (DEHEPSA)_{0.5}/DCAA and of a polyaniline film of the
25 prior art PANI(CSA)_{0.5}/MC in relation to temperature (in K).

Figure 2 shows the stress/strain curves of a polyaniline film of the invention PANI(DEHEPSA)_{0.5}/DCAA and of a polyaniline film of the prior art
30 PANI(CAS)_{0.5}/MC.